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Figure 3(b)

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Table 1. Mean characteristics for each treatment group in the primary study, stratified by age and gender

## INFORMATION, 1990, ON FERTILIZERS, NPK, AND PESTICIDES

WATER SUPPLY

AB 99412-961A, 1521000-3239926 May 18, 1981

ESTATE PLANNING

1102-01-1290-00284-112

ANALYSTS: DODD-MON-14E 11405684  
NIGHT ASSISTANT.

seed, the latter being sericea; (2) lies adjacent to a lateral, and from which one further section of ground and which has an irregular form, abutting the surface of the road so that the vegetation depth of the ridge overtops it; (3) a series of beds, very like the first, but in this case (3) rises above the surface of the road.

DE LOS VÍNCULOS ENTRE PERSONAS DIFERENTES ENTRE EL MÉTODO DE INVESTIGACIÓN Y EL MÉTODO DE ANÁLISIS. SOC 1993.

673-10088-100-8028-000-00000-2005000

WILSON, CLARENCE, 1870-1942, *in* *WILSON, CLARENCE, WOODROW WILSON AND THE WORLD WAR*

Translated from the German

10/166778

Federal Republic of Germany  
German Patent Office

Offenlegungsschrift

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Title in German of the object of the invention:

*Verfahren und Anlage zur Herstellung von Pralinen*

METHOD AND APPARATUS FOR THE PRODUCTION  
OF CHOCOLATE CREAMS.

Description

The invention pertains to a method for the production of chocolate creams

[German: chocolates]\* (\*Translator's note: A *Praline* in German = chocolate cream, defined as: > small pieces of confectionary (candies), having chocolate filling &

coating of marzipan, nougat, cream, liquor, cognac, or fruits) whereby a cream-like filling mass on a conveyor belt is placed upon a base material, and coated with it, and whereby the preliminary (initial) product of the cream-like filling mass and the base material - after a cooling - are coated with a chocolate coating. The base materials consist of, e.g., marzipan, nougat, truffle mass, or similar, or are embodied as a piece of fancy pastry (baked ware), e.g., wafer. They can have shape and size. The chocolate cream filling is most often prepared in a so-called shaping (forming or molding) jigger; or fed into the latter, and with the help of the shaping jigger placed upon the base material. The most various cream-like filling masses are known as "chocolate cream fillings". They can also be pronouncedly sticky. Henceforth, the invention pertains to apparatus for the carrying out of such a method.

Within the framework of the measures, known in the practice, which form the point of departure of the invention, the conveyor belt is flat belt. The base materials are made beforehand, and are placed on the conveyor belt. In doing so, there originate assignment problems. Also, the chocolate cream filling, which is placed in the base material, should have a preset consistency, and may not be too-pronouncedly sticky, otherwise an automated production process is scarcely ever possible. Moreover, in the case of known method, short cycle times and, therewith,

high production outputs per unit time may not be achieved.

The objective to execute the method, described at the beginning, in such a way that a positioning of prefabricated base materials on the conveyor belt is not anymore required, so that the work can be accomplished with high efficiency at short cycle times, forms the basis of the invention.

In order for the set objective to be achieved, the invention teaches that the work can be carried out with a conveyor belt, which has recessed base-product [couplers] mold beds, that a base-product mass is fitted into the base-product mold beds, as well as the base-product mass is introduced into the base-product beds in order to be solidified, and that - after that - on the same conveyor belt, the chocolate cream filling is placed upon the base material, as well as the base materials together with the chocolate cream filling, placed thereon, is detached from the base-product beds (assumed as the issue under consideration pertains to a chocolate cream filling mass, which was heated, the preliminary (initial) product is cooled, and then the same is removed from the base-product beds). To this end, an active cooling can also be carried out. Pursuant to a preferred embodiment of the invention, the conveyor belt is heated prior to the filling of the base-product mass, and - indeed - normally slightly heated, in order to guarantee that the base materials' mass is uniformly distributed in the base-products beds. To this end, the conveyor belt -

over the course of its charging, or immediately after the putting on of the base material mass - can be subjected to a vibration. It is understood that the vibration can also be carried out over a longer time period. The cooling of the base material mass is functionally carried out in a cooling channel, through or across which the conveyor belt passes. Correspondingly, the work can be done when the preliminary (initial) product is cooled.

Conveyor belts, having recessed mold beds - also for the impacting of a shape or form to food products - are known in the abstract. It is understood that the beds of the entire belt - also within the framework of the invention - can also be normally pretreated, in order to be guaranteed that the initial product can easily be detached from the form beds.

The invention and a apparatus for the carrying out of the method thus

described

are circumstantially elucidated by means of a single drawing, which diagrammatically represents solely one exemplified embodiment. In the drawing:

Fig. 1 is a side view of a apparatus for the carrying out of the method in accordance with the invention;

Fig. 2 is a top view upon the object of the invention, as depicted in Fig. 1

The apparatus, diagrammatically represented in the figures, possesses a

driven conveyor belt 1, having base material beds 2, an automatically operated apparatus 3 for the feeding of the base material mass 4 into the base material beds 2, through or across which the conveyor belt 1 passes, and an automated shaping (forming or molding) jigger 5 for the placing of the chocolate-cream filling 6 upon the base material 4. There is also connected a cooling apparatus 7, having a apparatus - connected in series - for the removal of the initial product out of the base material 4, and the chocolate cream filling 6 from the conveyor belt 1. The conveyor belt is steered in an endless manner, and is also driven at a time cycle as the apparatus 3 for the insertion of the base-product mass 4 into the base-product beds 2, as well as the automated shaping (forming) jigger 5.

In accordance with the invention, flat conveyor belts are not anymore used in conjunction with the production of chocolate creams. The work is rather carried out with a conveyor belt 1, which has recessed base material mold beds 2. These are diagrammatically represented in Fig. 2 as circles. These are filled with the help of the automatically operated apparatus 3 for the filling of the base material mass 4 into the base material beds 2. The base material beds, filled in such a way, are characterized in Fig. 2 by means of a simple hatching in the drawing. They pass through a cooling channel 7a. The conveyor belt 1 passes henceforth across an automated shaping (molding) jigger 5. With the help of the latter, the

chocolate-cream fillings 6 are put onto the base materials 4, which, in doing so, - as always - are located in the base material mold beds 2. As far as that goes, the chocolate-cream fillings 6 do not directly get in contact with the conveyor belt, and, indeed - as far as possible - also with the edge of the mold beds 2. In Fig. 2, the base materials 2 together with the chocolate cream filling 6, placed on them, are diagrammatically represented by double hatches. In the subsequent cooling direction Pb, there occurs such a comprehensive cooling that the base products 4 together with the chocolate-cream fillings 5 are detached from the base material beds 2. They are discarded in the exemplified embodiment. The base material beds 2 are - in connection thereto - free, in order to be again re-filled in the way described.

#### Patent Claims

1. Method for the production of chocolate creams [cream chocolates] whereby a chocolate-cream filling of a cream-like filling mass on a conveyor belt is placed upon a base material, and unified with it, and whereby the preliminary (initial) product of the cream-like filling mass and the base material - after a cooling - are coated with a chocolate coating, characterized in that the work is done with

the help of a conveyor belt, which has recessed base-material mold beds, that into the base-material mold beds there is inserted a base-material mass, as well as base material mass is brought in the base-material bed, in order to be solidified, and that - after that - on the same conveyor belt, the chocolate-cream filling is put upon the base materials, as well as the base material together with the chocolate-cream is detached from the base material mold beds,

2. Method, as claimed in claim 1, characterized in that the conveyor belt is heated up prior to the filling up or insertion of the base material mass,

3. Method, as claimed in claim 1 or 2, characterized in that the conveyor belt - when the filling up takes place, or directly after the filling of the base material mass - is subject to a vibration,

4. Method, as claimed in one of the claims claim 1 thru 3, characterized in that a cooling of the base material mass is carried out in a channel, through of across which the conveyor belt passes.

5. Apparatus for the carrying out of the method, as claimed in one of the claims 1 thru 4, characterized by - a driven the conveyor belt (1), having base-material mold-beds (2),

- an automatically operating device (3) for the filling of the base material mass (4) into the base material mold beds (2),
- a cooling channel (7a), across or through which the conveyor belt passes, and
- an automated shaping (molding) jigger 5 for the putting on of the chocolate-cream filling (6) upon the base-material beds (4),
- a cooling device (7b), having a device -- connected in series -- for the removing of the preliminary (initial) product (6) out of the base material (4), and the chocolate cream filling (6) from the conveyor belt (1),
- whereby the conveyor belt (1) is guided in an endless manner, and, also, the device (3) for the filling up of the base product mass (4) into the base product mold beds (2) as well as the automated shaping (molding) jigger 5 are operated at a time cycle

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